Dr. Peterson
Collaborate Workshop
12:30 p.m. Friday, Feb. 17, 2012, GTRI

- Welcome to the second Collaborate workshop at Georgia Tech. In the first one, we brought together people from Georgia Tech and Georgia Tech Research Institute. That workshop was very successful, resulting in several successful collaborations which you'll be hearing about this afternoon.
- For today's conference, we have expanded that to others in the bioengineering research community, including clinicians and investigators from Children's Healthcare of Atlanta and Emory. Our goal is simple: to explore the possibilities before us to create multidisciplinary collaborations. Those collaborations could result in solutions to some of the world's grand challenges.
- Sometimes the most profound solutions are born from what in hindsight seems obvious. For example, Georgia Tech is a research powerhouse, as is GTRI. And GTRI is a part of Georgia Tech. That's why a little over a year ago we aligned the major components of our research functions—GTRI and the Enterprise Innovation Institute or EI^2, along with our six colleges and other Georgia Tech support functions, to form a single, unified reach enterprise under the leadership of Dr. Steve Cross.
- While we are aligned organizationally, there are still times when Georgia Tech does not take advantage of the resources available at GTRI, including testing facilities and complementary expertise. In this challenging economic environment, it is imperative that we maximize resources. In addition, solutions to grand challenges are requiring collaboration within disciplines. More and more, government and private agencies are looking at the level of interdisciplinary cooperation and the potential of innovation as factors when awarding research grants.
- Georgia Tech has a long history of educational and research partnerships with Emory, including of course one of the leading bioengineering and biomedical research and educational programs in the nation. The partnership has grown to include a regenerative medicine center, a biotechnology incubator, and research

collaborations in nanotechnology, bioinformatics, predictive health, safe water, vaccine development, robotics and clinical trials.

- Georgia Tech and Children's Healthcare of Atlanta partner in some 130 research areas, ranging from hydrogel delivery in resynostosis to help children have normal brain development, which Dr. Barbara Boyan will be talking about, to robust cyber medical systems. Steve Cross will share a few more details about some of these partnerships.
- I would like to share one example that I find fascinating. Dr. Ravi Bellamkonda, a professor of biomedical engineering at Georgia Tech and Emory University School of Medicine, teamed up with Dr. Barun Brahma, a pediatric neurosurgeon and Dr. Tobey MacDonald, a pediatric hematologist/oncologist, both on staff at Children's Healthcare of Atlanta. They are working to create a novel bioengineering solution aimed at pediatric brain tumors. The project brought an engineering perspective to a problem that had frustrated oncologists for years. It was so novel that it received one of only seven EUREKA grants awarded two years ago by the National Cancer Institute. EUREKA stands for Exceptional, Unconventional Research Enabling Knowledge Acceleration.
- Through what Dr. Bellamkonda has coined as "exvasion" they are working to capture the idea of directing invading cells outward and then killing them. It brings the tumor to the drug. Medulloblastoma is the most common malignant brain tumor found in children, with five-year survival rates at only 50 to 70 percent. The research that these men and their teams are doing could someday help eradicate any type of tumor.
- Together, we have a track record of successful partnerships that is the envy of many universities and hospitals. I believe the potential exists to become a national model of multi-disciplinary collaborations. Thank you for participating in today's conference and exploring the possibilities before us. I believe they are almost limitless.